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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/810,791	HWANG ET AL.	
	Examiner	Art Unit	
	Chandras Patel	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 15 July 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-22 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 21 June 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 7/15/2005.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 5, 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Radulovic (USPN 7,215,663).

Regarding claim 1, Radulovic teaches a system comprising: a real-time routing server to route and process multimedia communication sessions over a network [Fig. 2A, 70]; a group server to manage the multimedia communication sessions over the network, wherein the group server is coupled to the routing server [Fig. 2A, 40]; a plurality of end-point processing devices to schedule and conduct multimedia communication sessions over the network, wherein the plurality of end-point processing devices are coupled to the routing server and the group server [Fig. 2B, 50, Col. 14, lines 18-27].

Regarding claim 2, Radulovic teaches the network is an IP network [Col. 14, lines 16-18], wherein each of the routing server, the group server, and the plurality of end-point processing devices have a separate IP address for identification [Col. 15, lines 55-59].

Regarding claim 5, Radulovic teaches and end-point processing device comprises a personal computer operated by a user [Col. 12, lines 36-39].

Regarding claim 6, Radulovic teaches and end-point processing device comprises a dedicated hardware device [Col. 12, lines 36-39].

4. Claims 14, 15, 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsubara (USPN 7,215,640).

Regarding claim 14, Matsubara teaches a method for reserving bandwidth and media processing resources [Fig. 5], comprising: checking whether media processing resources on a source real-time routing server are sufficient for a user to join a multimedia communication session [Fig. 5, 156]; for a multimedia communication session involving multiple real-time routing servers, sending reservation requests from the source real-time routing server to all destination real-time routing servers [Col. 5, lines 42-54]; checking for notifications of successful bandwidth reservations for paths from the source real-time routing server to destination real-time routing servers [Fig. 5, 176, Col. 5, lines 65-67, Col. 6, lines 1-4]; checking for notification of successful media processing resource reservations for destination real-time routing servers [Fig. 5, 176].

Regarding claim 15, Matsubara teaches the source real-time routing server checks for the notifications of successful bandwidth reservations and media processing resources [Col. 5, lines 65-67, Col. 6, lines 1-9].

Regarding claim 17, Matsubara teaches if the notifications of successful bandwidth reservations and successful media processing resource reservations are not received with a preset time period, then the notifications are not considered to have been received [Col. 7, lines 8-21].

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Radulovic (USPN 7,215,663) in view of Akhtar (USPN 6,418,139).

Regarding claim 3, Radulovic teaches the system as discussed in rejection of claim 1. However, Radulovic does not teach the real-time routing server includes dynamic route processing circuitry to dynamically determine a shortest delay path.

Akhtar teaches the dynamic route processing circuitry to dynamically determine a shortest delay path [Col. 6, lines 13-18].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include circuitry to dynamically determine a shortest delay path so that when routes change new routes can be calculated dynamically [Col. 3, lines 46-48].

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Radulovic (USPN 7,215,663) in view of Huddle (USPN 6,950,407).

Regarding claim 4, Radulovic teaches a system as discussed in rejection of claim 1.

However, Radulovic does not teach the real-time routing server in a transit mode can pass through a multimedia communication session without processing data of the multimedia communication session.

Huddle teaches the real-time routing server in a transit mode can pass through a multimedia communication session without processing data of the multimedia communication session [Col. 16, lines 30-35].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have real-time routing server operate in transit mode broaden the audience of providers that may interconnect with each other [Col. 16, lines 26-27].

8. Claims 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Radulovic (USPN 7,215,663) in view of Matsubara (USPN 7,215,640).

Regarding claim 7, Radulovic teaches a method for determining a topology of a network, comprising: obtaining from a group server respective addresses for real-time routing servers to route and process multimedia communication sessions over the network [Col. 8, lines 42-45, resource allocation table will require the knowledge of IP addresses since it's a IP based network]; setting a static neighbor configuration [Col. 8, lines 38-42, call setup requests is setting static neighbor configuration].

However, Radulovic does not teach determining a dynamic neighbor configuration based on quality of service levels for respective paths between real-time routing servers, hop counts along paths, delays between real-time routing servers, bandwidth capacity between real-time routing servers, and common path traffic between real-time routing servers.

Matsubara teaches determining a dynamic neighbor configuration based on quality of service levels for respective paths between real-time routing servers, hop counts along paths, delays between real-time routing servers, bandwidth capacity between real-time routing servers, and common path traffic between real-time routing servers [Col. 5, lines 42-54].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine a neighbor configuration dynamically so that when location of the terminals changes the path could be changed automatically which occurs frequently in the network [Col. 2, lines 63-66].

Regarding claim 8, Radulovic further teaches forming a routing table based on neighbor information [Col. 15, lines 49-51].

Regarding claim 9, Radulovic further teaches determining the dynamic neighbor configuration based on a network administration policy [Col. 15, lines 49-51].

Regarding claim 10, Radulovic further teaches a dynamic neighbor configuration is repeated when a new real-time routing server is added to network [Col. 11, lines 59-67 – Col. 12, lines 1-5].

Regarding claim 11, Matsubara teaches obtaining information regarding quality of service levels for respective paths between real-time routing servers, hop counts along paths, delays between real-time routing servers, bandwidth capacity between real-time routing servers,

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and common path traffic between real-time routing servers [Col. 5, lines 42-54]; rejecting all paths not meeting a quality of service requirement [Fig. 5, 184]; sorting candidate real-time routing servers according to distance measurements, including hop counts along paths [Col. 11, lines 51-57]; determining whether there is path between a first real-time routing server and a candidate real-time routing server [Fig. 5, **Flow chart determines if path exists or not**]; determining whether a delay between the first real-time routing server and the candidate real-time routing server is less than a maximum delay [Col. 1, lines 36-40]; determining whether a bandwidth capacity between the first real-time routing server and the candidate real-time routing server is greater than a minimum bandwidth capacity [Col. 1, lines 36-40]; determining whether the candidate real-time routing server shares a common path with neighbor real-time routing server [Col. 1, lines 46-51].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine dynamic neighbor configuration based on above parameters so that high-bandwidth and real-time transfer of data can be done efficiently [Col. 1, lines 34-36].

Regarding claim 12, Matsubara teaches the operations of determining whether there is a path, whether a delay is less than a maximum delay, whether a bandwidth capacity is greater than a minimum bandwidth capacity, and whether a common path is shared are repeated for each candidate real-time routing server [Col. 10, lines 53-67 – Col. 11, lines 1-12].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to repeat above steps when a new server connects to network so that QoS of the path can be satisfied [Col. 10, lines 53-55].

Regarding claim 13, Radulovic further teaches the network is an IP network [Col. 14, lines 16-18].

9. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over of Matsubara (USPN 7,215,640) in view of Radulovic (USPN 7,215,663).

Regarding claim 16, Matsubara teaches a method ad discussed in rejection of claim 14.

However, Matsubara does not teach media processing resources are digital signal processing (DSP) resources.

Radulovic teaches media processing resources are DSP resources [Col. 12, lines 36-39].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use DSP so that capacity of the system can be increased [Col. 12, lines 36-49].

10. Claims 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsubara (USPN 7,215,640) in view of Kurose et al. (USPN 7,076,540).

Regarding claim 18, Matsubara teaches a method for reserving bandwidth in a network [Fig. 5] comprising: receiving at a first real-time routing server a bandwidth reservation request from an upstream real-time routing server [Fig. 5, 152, Col. 6, lines 42-49]; determining whether at least one downstream path to a destination real-time routing server has enough bandwidth [Fig. 5, 156, Col. 6, lines 50-53]; if the first real-time routing server is a destination only real-time routing server or a destination and transit real-time routing server, then reserving bandwidth for a path between the first real-time routing server, and the upstream neighbor real-time routing server [Col. 11, lines 34-43].

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However, Matsubara does not teach if the first real-time routing server is a transit real-time routing server and not a destination real-time routing server, then forwarding the bandwidth reservation request to a downstream neighbor real-time routing server that has enough bandwidth and leaving a usage count unchanged; if the first real-time routing server is not only a transit real-time routing server but also a destination real-time routing server, then forwarding the bandwidth reservation request to a downstream neighbor real-time routing server that has enough bandwidth and incrementing the usage counting by one.

Kurose teaches if the first real-time routing server is a transit real-time routing server and not a destination real-time routing server, then forwarding the bandwidth reservation request to a downstream neighbor real-time routing server that has enough bandwidth and leaving a usage count unchanged [Col. 8, lines 53-61]; if the first real-time routing server is not only a transit real-time routing server but also a destination real-time routing server, then forwarding the bandwidth reservation request to a downstream neighbor real-time routing server that has enough bandwidth and incrementing the usage counting by one [Fig. 4, 58].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to forward the bandwidth reservation request since RSVP-incompatible router cannot service the request [Col. 7, lines 50-56].

Regarding claims 19, 22, Kurose teaches if a bandwidth reservation request is forwarded to a downstream neighbor real-time routing server, then checking for notification of a successful bandwidth reservation for a path from the first real-time routing server to the downstream neighbor real-time routing server [Col. 9, lines 39-42].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to check if a bandwidth request was successful so that policy server can recognize that reservation was made for a bandwidth [Col. 10, lines 1-3].

Regarding claim 20, Matsubara teaches a method for reserving bandwidth in a network [Fig. 5] comprising: receiving at a first real-time routing server a bandwidth reservation request from an upstream real-time routing server [Fig. 5, 152, Col. 6, lines 42-49]; determining whether at least one downstream path to a destination real-time routing server has enough bandwidth [Fig. 5, 156, Col. 6, lines 50-53]; selecting an upstream neighbor real-time routing server from upstream neighbor real-time routing servers sending a bandwidth reservation request within a predetermined time period [Col. 6, lines 50-53, after the first-hop reserves bandwidth it is selected and its Flow-Path Table is searched]; if the first real-time routing server is a destination only real-time routing server or a destination and transit real-time routing server, then reserving bandwidth for a path between the first real-time routing server, and the upstream neighbor real-time routing server [Col. 11, lines 34-43].

However, Matsubara does not teach if the first real-time routing server is a transit real-time routing server and not a destination real-time routing server, then forwarding the bandwidth reservation request to a downstream neighbor real-time routing server that has enough bandwidth and leaving a usage count unchanged; if the first real-time routing server is not only a transit real-time routing server but also a destination real-time routing server, then forwarding the bandwidth reservation request to a downstream neighbor real-time routing server that has enough bandwidth and incrementing the usage counting by one.

Kurose teaches if the first real-time routing server is a transit real-time routing server and not a destination real-time routing server, then forwarding the bandwidth reservation request to a downstream neighbor real-time routing server that has enough bandwidth and leaving a usage count unchanged [Col. 8, lines 53-61]; if the first real-time routing server is not only a transit real-time routing server but also a destination real-time routing server, then forwarding the bandwidth reservation request to a downstream neighbor real-time routing server that has enough bandwidth and incrementing the usage counting by one [Fig. 4, 58].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to forward the bandwidth reservation request since RSVP-incompatible router cannot service the request [Col. 7, lines 50-56].

Regarding claim 21, Matsubara further teaches if only one of the upstream neighbor real-time routing servers sending bandwidth reservation requests within the predetermined time period has a maximum usage count, then selecting that upstream neighbor real-time routing server [Col. 6, lines 50-53, after the first-hop reserves bandwidth it is selected and its Flow-Path Table is searched]; if two or more of the upstream neighbor real-time routing servers sending bandwidth reservation requests within the predetermined time period have the maximum usage count, than selecting an upstream neighbor real-time routing server with an earliest arrival time for the bandwidth reservation request [Col. 12, lines 17-28].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chandrahas Patel whose telephone number is 571-270-1211. The examiner can normally be reached on Monday through Thursday 7:30 to 17:00 EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CBP



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SUPERVISORY PATENT EXAMINER